

WHAT IS CLAIMED IS:

1. A materials handling system including a rotary shelf rotatable around a vertically extending rotary shelf axis and a plurality of load receiving sections disposed on a rotary circular path having its center located at the rotary shelf axis, characterized in that

a transfer means is installed laterally outside the rotary shelf, the transfer means having a transfer operating section which is rotatable around a transfer axis parallel with the rotary shelf axis and which is adapted to operate when placed on a transfer circular path tangentially superposed on the rotary circular path, with a fixed shelf installed on the transfer circular path.

2. A materials handling system as set forth in Claim 1, characterized in that

the rotary shelf, transfer means and fixed shelf are associated with one rotary circular path and one transfer circular path.

3. A materials handling system as set forth in Claim 1, characterized in that

the fixed shelf is disposed in each of a plurality of places on the transfer circular path.

4. A materials handling system as set forth in Claim 1, characterized in that

the rotary shelf is provided with groups of load receiving sections in a plurality of vertically spaced steps, the fixed shelf is provided with load support sections in a plurality of vertically spaced steps, and the transfer means is adapted to operate correspondingly to the plurality of vertically spaced steps in the rotary shelf and the fixed shelf.

5. A materials handling system as set forth in Claim 1, characterized in that

the rotary shelf is rotatable forwardly and backwardly for an angle up to a maximum of 180 degrees.

6. A materials handling system as set forth in Claim 1, characterized in that

during the transfer means is operating with respect to the fixed shelf, the rotary shelf is prepared in advance.

7. A materials handling system as set forth in Claim 1, characterized in that

the rotary shelf, transfer means and fixed shelf are disposed in a clean atmosphere.

8. A materials handling system including a rotary shelf rotatable around a vertically extending rotary shelf axis and a plurality of load receiving sections disposed on a rotary circular path having its center located at the rotary shelf axis, characterized in that

a rectangular box-like surrounding wall body surrounds the rotary shelf, at least one corner of the surrounding wall body being formed as a cut portion over a vertically extending set range, and a conveyance means is installed which passes outside the cut portion.

9. A materials handling system as set forth in Claim 8, characterized in that

the surrounding wall body is provided with a load passage portion for delivery of loads to and from the conveyance means.

10. A materials handling system as set forth in Claim 8, characterized in that

installed within the surrounding wall body, in addition to the rotary shelf, are the fixed shelf and the transfer means

adapted to operate on the rotary shelf and the fixed shelf.

11. A materials handling system as set forth in Claim 8, characterized in that

installed within the surrounding wall body, in addition to the rotary shelf, are the fixed shelf and the transfer means, the transfer means being disposed laterally outside the rotary shelf, a transfer operating section of the transfer means is rotatable around the transfer axis parallel with the rotary shelf axis and is adapted to operate when placed on a transfer circular path tangentially superposed on the rotary circular path, the fixed shelf being disposed on the transfer circular path.

12. A materials handling system as set forth in Claim 8, characterized in that

the inside of the surrounding wall body is in a clean atmosphere.

13. A materials handling system as set forth in Claim 8, characterized in that

the surrounding wall body is disposed in a clean room.

14. A materials handling system including a rotary shelf rotatable around a vertically extending rotary shelf axis and a plurality of load receiving sections disposed on a rotary circular path having its center located at the rotary shelf axis, characterized in that

a surrounding wall body surrounds the rotary shelf, and disposed within the surrounding wall body, in addition to the rotary shelf, are a fixed shelf and a transfer means adapted to operate on the fixed shelf, part of the surrounding wall body being formed as an opening/closing door, the fixed shelf being disposed in the opening/closing door, the fixed shelf being

movable through an opening left after the opening/closing door has been opened.

15. A materials handling system as set forth in Claim 14, characterized in that

the transfer means is adapted to operate on the fixed shelf and the rotary shelf.

16. A materials handling system as set forth in Claim 14, characterized in that

the transfer means is installed laterally outside the rotary shelf, the transfer means having a transfer operating section which is rotatable around a transfer axis parallel with the rotary shelf axis and which is adapted to operate when placed on a transfer circular path tangentially superposed on the rotary circular path, and disposed on the transfer circular path is a fixed shelf which is movable through an opening left after the opening/closing door has been opened.